



THE ASYMMETRIC ARMY

Transforming the Army
for *Force 2025*

Lieutenant-Colonel Cole F. Petersen, Canadian Army

Source: Adobe

PART I: INTRODUCTION

As the Canadian Armed Forces (CAF) enters the 2020s, it finds itself operating in an international environment facing a series of pacing threats—state and non-state actors making progress toward militarily challenging the West. In the face of these threats, the CAF is adapting. Under the aegis of *Strong, Secure, Engaged: Canada's Defence Policy (SSE)*, the CAF has undertaken efforts to identify and build the appropriate force structure to meet the operational requirements of an uncertain and competitive international environment.

Strong, Secure, Engaged: Canada's Defence Policy demands an agile, multi-purpose, combat-ready Canadian Army capable of contributing to the CAF's eight core missions through execution of multiple, concurrent domestic and international operations.¹ While the Army continues to prepare and deploy soldiers abroad in the face of increasing peer-competitor threats and growing irregular adversary capability, it is now challenged by the fact that its force-generation construct, *Advancing with Purpose*, 3rd edition, is based on old defence policy and was built for a force structure established at the end of the Cold War.² For these reasons, concurrent operational demands and the various probable future mission sets in the coming years will challenge the Army to ensure that it provides the widest array of force elements to the joint force in order to remain a relevant component of Canada's defence. In response, the Army has reinvigorated its future force design with the *Force 2025* initiative, promulgated by the Commander of the Canadian Army in September 2020.³

This article argues that the Canadian Army should reorganize into an asymmetric force structure built around light-, medium- and heavy-force brigades and revise its Managed Readiness Plan (MRP) to ensure that it is best postured to meet the concurrency requirements of *SSE* and the operational demands of the current and future operating environment. The impetus to restructure the Army is driven in part by operational demand and resource constraints, and in part by the opportunity to optimize the light, medium and heavy force elements⁴ to maximize proficiency and force readiness. *A Force 2025* asymmetric army can—through better organization of how it fights, trains and lives—provide a superior force-generation base for *SSE*, giving the CAF adaptable and flexible force packages in the decades to come.

PART II: THE IMPERATIVES FOR CHANGE

Any proposal for restructuring the force must be derived first and foremost from operational requirements: function must drive form. The policy *SSE* speaks to the future operating environment and the requirements of the Army,

while the Army's new capstone concept, *Close Engagement*, looks specifically to the future land operating environment and how the army can best contribute to the joint force.

The key determining factor in the Army's force structure should be the operational environment in which it is expected to compete. *Strong, Secure, Engaged: Canada's Defence Policy* describes the future operating environment as being defined by three key security trends.⁵ First, the future security environment will be defined by the evolving balance of power, which is driven by changing patterns of influence among state and non-state actors. The Army will be expected to operate in an environment where peer-state adversaries are more and more active. Second, there is the requirement to adapt to the changing character of conflict. Driven by the evolving balance of power, conflict is evolving as adversaries seek to achieve political objectives through competitive means other than violence and force-on-force engagements. Within what is often termed the "grey zone," the Army will operate against adversaries who use tactics, often asymmetric and ambiguous in character, to create adverse conditions to pre-empt our military operations or avoid confrontation with Western military forces.⁶ Lastly, rapid technological evolution will force the Army to constantly review its structures and operating concepts to properly adapt to the double-edged sword of information-age technologies, which provide future advantages and create new vulnerabilities.

In recognition of this operating environment, *SSE* requires the Army to maintain "the proper mix of combat capabilities, the ability to operate jointly with the rest of the Canadian military and in concert with key allies and partners"⁷ as the critical determinant of success. This will be based upon the scalability and adaptability of the brigade group and its ability to generate combat power in the form of self-sufficient combined-arms teams.⁸ *Close Engagement* amplifies this requirement and identifies five areas for Army evolution over the next 15 years: connectivity, agility, adaptability, integration and robustness.⁹ *Force 2025* is the initiative by which the Army will analyze and design a force structure to best achieve these requirements.

Although *Close Engagement* examines force employment trends and challenges, the Army's approach to force generation to meet these challenges is out of date. *Advancing with Purpose* was designed to fulfill the six missions of the previous government defence strategy, and it defined an output based on lines of operation for domestic response, an international sustained operation and a minor international surge operation.¹⁰ The Army's MRP, designed to manage force generation to accomplish these tasks, has had to evolve continuously to address the fact that the major sustained and minor surge mission set is simply not robust enough for the operational demand faced since 2014.

As a result of this evolution, the Army now puts an entire brigade at a time through a high-readiness work-up cycle, which is almost inevitably followed by posting many of the leaders of these teams out immediately after validation, prior to actual deployment. Other analyses of recent force development efforts have reviewed the Army's current structure, raising concerns that it is less than optimal in meeting the requirements of *SSE* and *Close Engagement*. Issues raised have included the sustainability of the current structure, an inefficient annual training cycle that results in posting turbulence, excessive training costs and the potential for insufficient capacity of key supporting capabilities.¹¹

All of this means that the Army as currently structured is not fit for purpose. It is a legacy structure inherited from the end of the Cold War, which saw the disbandment of 4 Canadian Mechanized Brigade Group (4 CMBG) and an end to Canada's forward deployment in Europe, the disbandment of the Canadian Airborne Regiment and the creation of three symmetric CMBGs based in Canada.¹² For nearly 25 years, this structure centred on producing one or two infantry battle groups to deploy on a series of peacekeeping, peace enforcement and counter-insurgency missions.

This 25 year-old symmetric structure is straining to deal with operational demands following the end of combat operations in Afghanistan. The desire to regain proficiency in brigade-level operations has caused the Army to deploy more and more of its forces into a readiness cycle, with annual brigade validation exercises consuming a large part of the Army's training resources and efforts. Despite preparing an entire brigade, non-templated missions, such as Building Partner Capacity (BPC) missions in Ukraine or Iraq, or integrating into a NATO battle group in Latvia, result in the deployment of organizations that look very different from the light armoured vehicle (LAV) based medium-force battle group which the current force structure is designed to produce.

To stay relevant and meet the requirements and aspirations of *SSE* and *Close Engagement*, the *Army of Force 2025* must ensure that its force-generation outputs are relevant to the joint force. This relevance can be summed up in a value proposition: the Army provides scalable land power to deter and, if required, defeat adversary actions as part of the joint force. To deliver on this value proposition in the current strategic environment, the Army must

1. leverage its partnerships and activities to maintain regional understanding and access around the globe;
2. be capable of providing land force elements that can detect, counter and disrupt adversary activities below the threshold of armed conflict;

3. be ready to provide rapidly deployable land force elements to respond to crises around the globe; and
4. produce forces capable of transitioning rapidly to ground combat missions in any theatre and climate, and against any adversary.

In light of this value proposition, there are three imperatives that support the move to an asymmetric army. First is the operational demand of the government's defence policy commitments. *Strong, Secure, Engaged: Canada's Defence Policy's* concurrency requirement demands a mix of force packages for missions, which the Chief of Force Development (CFD)'s Force Mix and Structure Design (FMSD) study has analyzed, that determine the nature of probable future missions for deployed CAF force elements. The FMSD mission sets provide a variety of operational scenarios requiring the Army to force generate elements for rapid response, sustained presence or a surge of combat power. An asymmetric Army structure creates an optimal base for this.

Second is the requirement to institutionalize light forces, represented in the 2017 Master Implementation Directive (MID) for Light Forces. Although purpose-built light forces have been present in the Army since the inception of the Canadian Airborne Regiment in 1968, they have, since 1993, largely been an adjunct force in the CMBGs. The Commander Canadian Army's intent is to provide "purpose built, scalable and agile light forces" that can generate and sustain fighting power without dependence on fighting vehicles, achieve increased strategic and operational responsiveness through deployment by air, land and sea, and have the personnel, equipment and training to operate in selected unique environments.¹³ The creation of an asymmetric army would provide a home for Canada's light forces to fully operationalize the directive.

Third, the requirement to move to an asymmetric army is driven by the realities of resource constraints and the need to concentrate the Army's medium and heavy forces in the face of resource limitations. The Army is confronted with the hard reality that it simply does not possess the platforms and resources to maintain three equal and fully enabled mechanized formations capable of generating light, medium and heavy forces. Symmetry is inefficiency, and the Army cannot afford inefficiency. This is especially noticeable with "low-density, high-demand" platforms such as tanks, armoured engineering vehicles and the support platforms to keep these vehicles functioning. The asymmetric army would create efficient and focused centres of excellence for optimal generation of medium and heavy forces.

PART III: THE ASYMMETRIC ARMY

The asymmetric army proposed in this article presents a structure which responds to, and optimizes for, the above-mentioned imperatives for change. The following proposal for the asymmetric army is structured in terms of how the Army fights (its operational output), how the Army trains (how it builds land combat power) and how the Army lives (how it is organized in Canada).

The proposed structure is bounded by specific restraints to maintain feasibility as an evolutionary course of action. The first restraint is that this proposal does not eliminate any units from the army. While proposed force restructuring could certainly do so, such a wholesale review requires deeper study of implications beyond the scope of this work. Likewise, this proposal does not consider closure of any existing bases or armouries, as the details of defence infrastructure are outside of this analysis, nor does it propose any changes to the existing Divisional structure, to the Canadian Army Doctrine and Training Centre (CADTC) or to the institutional Divisional Support Groups. The proposal is focused on generation of the joint force, and analysis of the institutional side of the army is an important topic for further exploration. Lastly, this proposal does not consider the organization of the Army Reserve. It accepts the progress gained in assigning mission tasks to each unit of the Army Reserve and acknowledges that a change to the Regular Force structure could have significant implications for the Army Reserve that are worth exploring in follow-on analysis.

This proposal also makes certain assumptions related to the Army’s near-term roles and size. In proposing an asymmetric army, this article makes the following assumptions:

1. There will be no significant change to the overall Regular and Reserve establishment of the Army. Any increase in personnel would be helpful, while a sharp decrease would force the Army to reconsider its fundamental structure.
2. Units and sub-units will be fully manned for force employment purposes. Although this is certainly not the case now, due to current unit establishments and personnel turbulence, the Army has methods (cross-posting, reserve augmentation) of addressing these issues.
3. The logical output of *SSE* concurrency as the operational demand for the CAF and the Army will remain as is for the foreseeable future. It is possible that *SSE* may be replaced by future governments in the near term, but the logic of *FMSD* and the high demand posed by the international environment means that concurrency of operational output will remain.

4. No new major equipment acquisitions, other than those currently in the Army force development system, are assumed in the proposal. New programs to address existing Army capability gaps would be a welcome addition to proposed structure, but none are included in the asymmetric army estimate.

Any organizational proposal for the Army must be rooted in function—operational output—with form flowing logically from it. Determining how the Army should live and train must start with a consideration of how its forces will fight. How the Army fights is derived from analysis of operational demand for force elements, tactical requirements of the current operating environment and sustainability of a force-generation base.

Defend Canada DART Deployment NEO Small Missions
2 x Minor Time-limited Deployments
2 x Minor Sustained Deployments
2 x Major Sustained Deployments
1 Major Time-limited Deployments
Surge of Forces for Major Contingency

Table 1: *Canada’s Defence Policy* Concurrent Task Requirements

HOW THE ASYMMETRIC ARMY WILL FIGHT: OPERATIONAL OUTPUT

The Army’s operational output is defined in *SSE*, which states that the CAF must be capable of undertaking concurrent operations in Canada and abroad. Core to these tasks are the defence of Canada (including support to domestic authorities) and international response to foreign disasters and non-combatant evacuation. This implies a continued contribution by Canada to smaller UN missions around the globe. In addition to these core tasks, there is the requirement to contribute to international peace and security through a series of minor and major operations, limited or sustained in duration, outside of Canada. Lastly, the requirement to surge a significant element of the

DOMESTIC RESPONSE	SUSTAINED PRESENCE
1. Domestic Immediate Response Unit (IRU)	7. Building Partner Capacity Rapid Response
RAPID RESPONSE	8. Alliance/Coalition Deterrence
2. Defence of Canada	9. Chapter VI Peace Support
3. Non-Combatant Evacuation	SUSTAINED/SURGE COMBAT OPERATIONS
4. Foreign Disaster Response	10. Chapter VII Peace Enforcement
5. Epidemic Response	11. Coalition Counterinsurgency
6. Global Crisis Response	12. Conventional Combat Operations

Table 2: Land Operations Mission Sets

CAF to fight in a major regional contingency is implicit in the requirement to meet Article 5 NATO commitments (see Table 1 for the concurrent task list).

Although *SSE* provides the CAF with core missions and a list of concurrent tasks that it must be prepared to execute, the policy does not specify which of those tasks the Army will contribute to. Clearly, some or all of them will involve other elements of the joint force. To better understand the likely mix of missions and force element requirements for *SSE* tasks, CFD's FMSD initiative analyzed historical missions conducted by the CAF, their frequency and their requirements in terms of joint force elements. That analysis resulted in a joint scenario package consisting of likely mission sets and the likely joint force demand for each specific mission.¹⁴ Based on the joint scenario list, twelve types of tasks can be identified that would likely require a large land force component contribution. Those missions, organized into four distinct mission sets (Table 2) provide a picture of the Army's likely missions in the future.

The four mission sets—Domestic Response, Rapid Response, Sustained Presence, and Sustained/Surge Combat Operations—encompass a series of distinct operational tasks with specific requirements in terms of time, space and force. The Army must ensure that its force-generation base is optimized to produce force elements that can operate successfully in any of these mission sets, in any environment and against any adversary. The proposed asymmetric army is better suited, through efficiency and proficiency, to produce cohesive and adaptive land combat power from across the spectrum of light, medium and heavy forces to meet concurrency demands across all of these mission sets.

The first mission set is Domestic Response, which can take the form of a variety of tasks, including security-focused aid to civil power and humanitarian-focused disaster response. Distinctive factors of this mission set are that the Army and the CAF play a supporting role to provincial, territorial and federal governments, and that such missions usually call not for formed tactical elements but for organized and capable organizations to support strained civilian agencies. Canada's geography generally requires four to five Immediate Response Units (IRU) prepared to respond at all times.¹⁵ Each IRU consists of a vanguard sub-unit and the necessary follow-on elements to satisfy a "Request for Assistance." The Army Reserve plays an important role in enhancing the Army's response to Domestic Response tasks by providing follow-on forces. Risk is typically assumed by having the IRU tasked to units currently training for other mission sets, ensuring coverage in case of an emergency while allowing the Army to focus on tactical readiness.

The second mission set is Rapid Response, which, unlike Domestic Response, can occur anywhere around the globe and requires formed tactical elements. It may include responses to humanitarian crises, such as Non-Combatant Evacuation Operations (NEO), Foreign Disaster Response (serviced by the Disaster Assistance Response Team [DART]) and Epidemic Response, all of which may require force protection for mission-specific specialist elements.

The Rapid Response mission set also has other missions calling for force projection instead of humanitarian response. The Defence of Canada mission requires rapid projection of a force anywhere into Canada's vast geography, for tasks ranging from sovereignty exercises or operations to Northern force protection or deterrence.

The Global Crisis Response mission is one of short-notice deployment of Canadian land power anywhere around the globe: the purpose of this type of mission could be to respond to a perceived threat to an ally or partner, to demonstrate Canada's resolve regarding a specific interest or to project forces as part of a coalition into a rapidly changing or deteriorating situation. In some instances, the global response could serve as the initial deployment for what evolves into a Sustained Presence or Sustained/Surge Combat Operation. In terms of concurrency, missions in the Rapid Response mission set are likely to be considered a core task, a minor time-limited deployment or potentially a major time-limited deployment.

Properly equipped and trained light forces are well suited to the Rapid Response mission sets. The Light Forces Master Implementation Directive states that light forces are to be configured for strategic deployment to an area around the globe in less than one week.¹⁶ The asymmetric army can meet Rapid Response missions with purpose-built light forces. A vanguard company, built upon a light infantry company with supporting elements, can be tasked at high readiness, ready to deploy in 72 hours. The remainder of the light infantry battalion can form a light force battalion group (bn gp)¹⁷ prepared to follow on, if required, within one week.

The next mission set, Sustained Presence, involves sustained expeditionary operations in support of international security and stability. Specific missions of this type may require a formed tactical unit for tasks in the face of an adversary force, or may require a bespoke organization to support an ally or partner. The missions involved in Sustained Presence are Building Partner Capacity, Alliance/Coalition Deterrence and traditional Chapter VI Peace Support or peacekeeping operations. This mission set, in terms of concurrency, is likely to equate to a sustained minor or major deployment.

The BPC mission may or may not feature some form of organized threat, depending upon the extent of the Army's role in training, advising, assisting and potentially accompanying friendly forces. This mission will continue to be a critical task for the Army as it competes against adversary sub-threshold activity by leveraging its partnerships and activities to maintain regional understanding and access around the globe. The asymmetric army seeks to optimize readiness for this mission in creating a Security Force Capacity Building (SFCB) battalion.

In line with allied initiatives, the SFCB battalion would be a purpose-built, cross-branch organization designed to train, advise, assist and, if required, accompany partnered forces on operations. This unit would generate deployable force elements built around advising teams and would serve as a

centre of excellence for the training and cultural expertise required for these types of missions. Although any unit can, with time, task-tailor itself to meet the BPC mission (as seen with the army's generation of Operational Mentoring and Liaison Teams and training teams for Ukraine and Iraq), a bespoke unit would reduce the requirement for conventionally organized units to shift away from collective warfighting training for BPC tasks. The SFCB battalion could undertake the entirety of a BPC task, could form the core of a BPC task force with other augmentees, or could act as the initial force in for a BPC task, to be followed up by a formed task force from another army unit in subsequent rotations.

The other missions in the Sustained Presence mission set, Alliance/Coalition Deterrence and Chapter VI Peace Support missions, are well understood by the Army. These will often be conducted in the face of a hostile actor and will likely require a tactically organized force. A medium force bn gp or battle group (BG) often provides the optimal balance of mobility, protection and firepower to successfully conduct these missions. In some instances, dictated by the threat or the terrain, a heavy force BG or light force bn gp may be more appropriate. The varied requirements of the Sustained Presence mission set may necessitate re-rolling of units between light, medium and heavy posture if concurrency or mission duration becomes an issue, and an adaptive army MRP will enable the asymmetric army to make this achievable.

The final mission set, Sustained/Surge Combat Operations, speaks to the *raison d'être* of any army: to fight and win land battles. This mission set is composed of tasks conducted against hostile forces, requiring all-arms teams integrated into the joint force. These missions are Chapter VII Peace Enforcement Operations, Coalition Counterinsurgency Operations and Conventional Combat Operations. As with the Sustained Presence mission set, geography and adversary threat could demand light, medium, or heavy forces to deploy into Sustained/Surge Combat Operations. In terms of concurrency, a Sustained/Surge Combat Operation could be a major sustained or time-limited deployment.

Sustained/Surge Combat Operations could also call for a surge of forces for a major contingency. This latter mission, although not specially mentioned in *SSE*, is implied both by reference to meeting alliance commitments in response to an Article 5 transgression and by the reality that a combat mission may quickly demand more than *SSE's* concurrency allocation. An example of this is Op ATHENA, which at its height saw more than 3,000 CAF personnel deployed to Afghanistan. A surge operation to meet a major contingency may also force the CAF to reduce its commitment to other operations due to the immediacy of a combat operation.

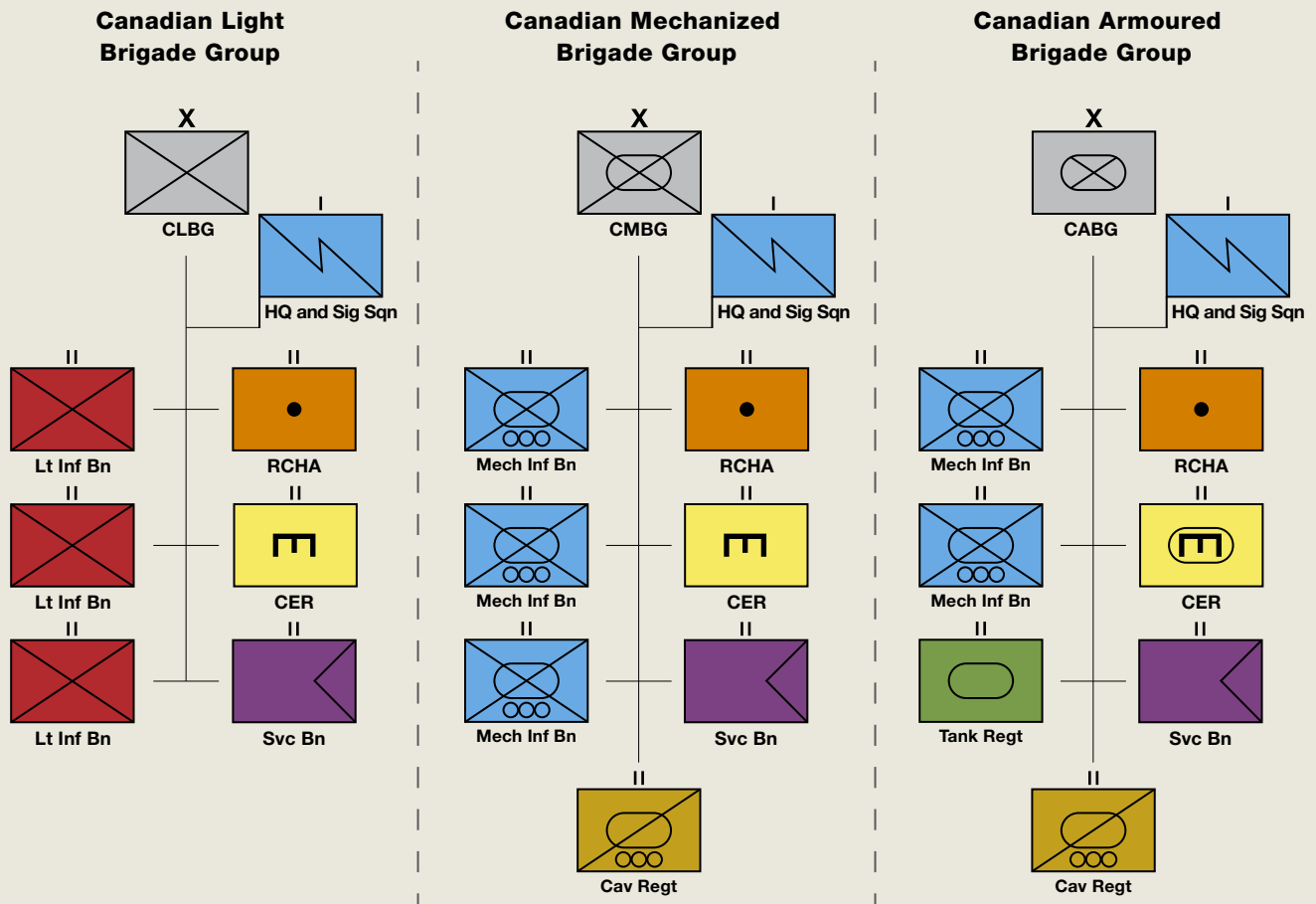


Figure 1: Asymmetric Army Manoeuvre Brigade Types

A surge mission, especially one designed to counter a grave threat to Canada’s national interests, could mean that all other concurrent commitments would become secondary in importance.

All of these mission sets, especially the latter two, could require higher-echelon command and control requirements, necessitating the deployment of a brigade group HQ, unique combat support force elements from a Combat Support Brigade and potentially parts of, or all of, a brigade group itself. For static missions, generally those in the Sustained Presence mission set, along with some Chapter VII Peace Enforcement and Coalition Counterinsurgency missions, the type of brigade HQ is largely irrelevant, as formation command and control requirements can be delivered by a light, medium or heavy force brigade group HQ.¹⁸

For mobile combat operations requiring a full or partial Canadian brigade, the brigade of choice will be determined by the nature of the adversary, the geography and the coalition requirement. In this scenario, with all other commitments becoming secondary, it is conceivable that all or part of a light, medium or heavy brigade could ultimately

be deployed for conventional combat operations. The asymmetric army’s advantage is that it is structured to organize formation-level light, medium or heavy forces based on the threat (see Figure 1).

A Canadian Light Brigade Group (CLBG) would be similar in design to the U.S. Army Infantry Brigade Combat Team¹⁹ and organized around a manoeuvre force of three light infantry battalions, with light engineering and artillery combat support and a service support unit tailored to light forces sustainment. The CLBG would serve as the formation centre of excellence for unique mobility requirements,²⁰ could be used in tandem with helicopters for air assault or with allied amphibious operations and could be ideally employed against regular and/or irregular threats in mountainous, jungle or otherwise difficult terrain. Although the CLBG is defined by its lack of armoured vehicles, nothing prohibits augmentation with protected mobility due to mission variables. One capability of light forces, the parachute capability, would require additional study, with an estimate to determine whether it is still required and, if so, to what extent; and how it could be generated and employed by the asymmetric army.²¹

A Medium Force Brigade Group would be similar in organization to the current CMBG, but with a third mechanized infantry battalion replacing the light infantry battalion. Like U.S. Army Stryker Brigade Combat Teams and the new British Army Strike Brigades,²² a CMBG would continue to provide flexible and adaptable general-purpose forces with integral mobility, firepower and protection. Built around the LAV 6 armoured fighting vehicle and containing medium-force engineer, artillery and sustainment units, the CMBG balances mounted infantry with combined arms support. The armoured regiment in a CMBG, which has been in a constant state of flux for the last 25 years,²³ should be converted to an armoured cavalry regiment, a new unit designed to lead the formation's sense/strike fight. This unit, consisting of armoured reconnaissance squadrons, should be integrated into current Army projects to develop new missile and unmanned aerial system (UAS) capabilities, enabling the development of cutting-edge integration of enemy detection, targeting and strike combined in a single mounted organization.²⁴

A Canadian Armoured Brigade Group (CABG) would become the centre of excellence for the Army's heavy forces. In the CABG, two LAV 6-based mechanized infantry battalions would be joined by a tank regiment, an armoured unit with three to four tank squadrons and a combat support squadron, enabling the brigade to form three heavy-force BGs.²⁵ The CABG would also possess an armoured cavalry regiment to execute the sense/strike fight for the formation. Combat support would come from an engineer regiment employing the army's armoured engineering elements and from an artillery regiment. Combat service support would be delivered by a service battalion tailored to provide heavy-force sustainment.

Given the wide array of missions across the four mission sets, the potential threat posed by regular, irregular and hybrid adversaries, and the wide-ranging geographic areas the army could be called to deploy into, the asymmetric army will be hard pressed to meet all demands in an increasingly competitive international environment. To ensure that it can meet the requirement of concurrency and sustain or adapt its force elements throughout extended mission mandates, we will now consider how it will train to produce and sustain land combat power.

HOW THE ASYMMETRIC ARMY WILL TRAIN: PRODUCING AND SUSTAINING COMBAT POWER

Although the asymmetric army provides an optimum base for a wide spectrum of land combat power options to a joint force employer, its primary mission is to manage a system for generating and sustaining this combat power. The army must ensure that it can provide cohesive force elements to execute today's current missions while also preparing for future concurrency requirements.

The current Army MRP, which emerged from the Army's efforts in Afghanistan, is not fit for purpose. It is a program that evolved from the Afghanistan-focused 18-month cycle to a 36 month cycle for entire brigades.²⁶ The problems with the current cycle are evident to those who have gone through it.

The current MRP does not synchronize with army career management and posting cycles. At its most fundamental level, readiness is about building cohesive teams, but the current plan moves units and brigades through high-readiness preparation and then posts many key leaders and staff out of the organizations just as they are validated as ready. In addition, the current MRP is intrinsically linked to preparing entire brigades and using the Canadian Manoeuvre Training Centre (CMTC)'s Exercise MAPLE RESOLVE for validation. Not only does this concentration incur a high cost to ready forces,²⁷ but the scale and scope of the exercise generates a significant task requirement for the other brigades, detracting from CMBG activities unrelated to high-readiness preparation.²⁸ The asymmetric army, to succeed as a concept, must utilize a revised MRP, one focused on team cohesion. If the army cannot manage cohesion, it cannot manage readiness.

This article proposes a revised MRP, built around a 24-month cycle of Build, Ready, Reset (see Figure 2). This is conceptually similar to what is currently being done, but one key difference is that for the asymmetric army, different parts of each brigade will be in different parts of the cycle. This is necessary to allow for the concurrent generation of light, medium and heavy forces, along with key combat support elements. One obvious result is that additional force-generation measures may be needed if a surge mission requires an entire brigade; however, as discussed above, this contingency is outside the scope of concurrency.



Figure 2: Revised Managed Readiness Plan for the Asymmetric Army

	20X1		20X2				20X3					
	NOV-DEC	JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEPT-OCT	NOV-DEC	JAN-FEB	MAR-APR	MAY-JUN	JUL-AUG	SEPT-OCT
Bde 1	BUILD (15 Nov-15 Jul) In-Posting Winter IT Spring Foundation CT Readiness CT and Validation			APS – Min Postings	READY (15 Jul-15 Mar) Mission Deployment Engagement Deployment (CT Upkeep) Winter IT			RESET (15 Mar-15 Nov) Redeployment Institutional / IT Sp Out-Posting				APS – Key Postings
Bde 2	RESET (15 Nov-15 Jul) Redeployment Institutional / IT Support Out-Posting			APS – Key Postings	BUILD (15 Jul-15 Mar) In-Posting Summer IT Fall Foundation CT Readiness CT and Confirmation			READY (15 Mar-15 Nov) Deploy Engage. Deployment (CT Upkeep) Summer IT				APS – Min Postings
Bde 3	READY (15 Nov-15 Jul) Deploy Engagement Deployment (CT Upkeep) Winter IT			APS – Key Postings	RESET (15 Jul-15 Mar) Redeployment Institutional / IT Support Out-Posting			BUILD (15 Mar-15 Nov) In-Posting Spring Foundation CT Rd CT and Confirm Summer IT				APS – Min Postings

Figure 3: Revised Managed Readiness Plan Synchronized with the Army Annual Training Year Cycle

A key element of this revised MRP is the recognition that, while readiness cycles may define specific tasks, the army has a fairly routine pattern of activity throughout each year. Tempo is never truly “high” or “low” for the field force, but rather a steady ebb and flow of predictable annual activities. The first, and most critical, part of this pattern—and one that must be respected—is the career management cycle and the annual posting season (APS). The APS will not be changed, as summer is the optimal time in Canada for home sales, movement of furniture and effects, and relocation of families. An MRP that does not respect the APS will inevitably be less optimal in building cohesive teams.

Built around the APS is the army’s traditional cycle of annual activities, driven by weather, climate and statutory or customary holiday periods, which can be termed the “training year” (as distinct from a fiscal year). When broken down into “blocks” of activity periods, the army’s annual training year, following the APS, consists roughly of a fall training period; the winter months for individual training, maintenance, and leave; and a spring/early-summer collective training period leading into the next summer. Summer is generally an ideal time for Army Reserve integration, support to individual training and block leave.

When the proposed 24-month readiness cycle is overlaid on this annual training cycle, it creates the revised three-stage MRP detailed at Figure 3. Essential to this MRP is the notion of key and minimal APS posting periods. Key APS posting periods are for units completing or starting the readiness cycle and are focused on posting in key leaders and staff, while minimal APS posting periods are for units in the midst of the Build or Ready phases. These periods ensure that

essential command and staff personnel are, to the extent possible, kept in place through a complete readiness cycle: the team that builds together is ready together and deploys together.

When the force elements of the asymmetric army are layered on this MRP, the operational output cycle for the army is as shown at Figure 4. Based on the asymmetric army structure, and considering the assumptions and limitations set out earlier, the revised MRP provides for a light-force bn gp at seven days’ notice to move (with a vanguard company at 72 hours’ notice to move), a medium-force bn gp or BG built around a mechanized infantry battalion, and a heavy-force BG built around either a mechanized infantry battalion or the tank regiment. The domestic IRU in each divisional area is always maintained as a secondary task to be managed within the division.

Each of these elements would spend eight months in the ready state and, if called to deploy, could expect an eight-month deployment for expeditionary tasks. If not deployed on a named mission, ready elements could be employed abroad in accordance with global engagement plans to provide the required strategic effects through presence and engagement. This MRP for the asymmetric army also allows for built-in flexibility in the face of a sustained demand for a particular type of force due to terrain, adversary or allied requirements. Units could, if required, be provided with the time, equipment and training to adapt to light-, medium- and heavy-force postures, as was done when light infantry battalions deployed to Afghanistan in LAVs.

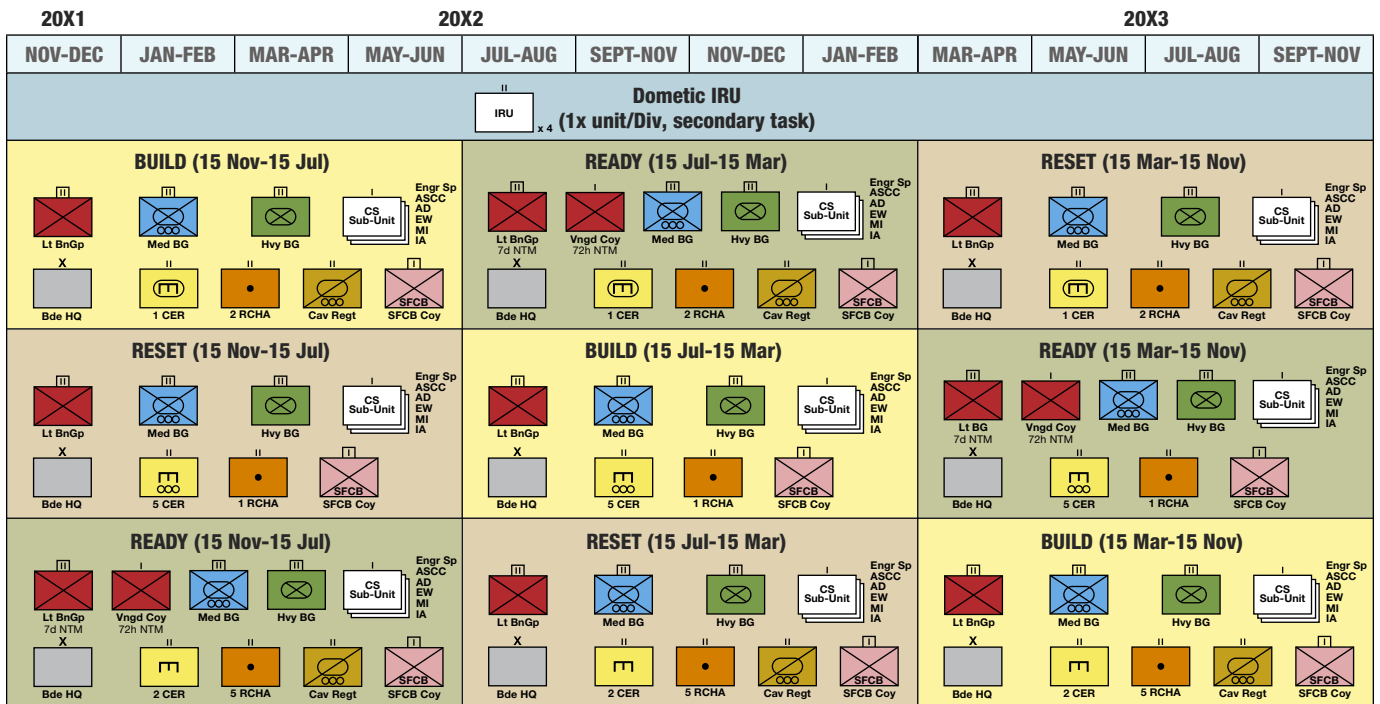


Figure 4: The Asymmetric Army in the Managed Readiness Plan

With the potential for multiple units across the army in the build cycle, the asymmetric army’s MRP no longer revolves around a single culminating validation event held by the CMTC at CFB Wainwright in May and June. High-readiness validation is now done during a unit’s Build phase and may or may not require movement to CFB Wainwright for execution. In the asymmetric army, readiness is focused on the unit level, and CMTC can support the revised MRP by providing Level 4 through 6 validation packages, tailored to a light/medium/heavy force, in any training area.

Although the focus of the asymmetric army’s MRP is unit readiness, brigade HQs still must be trained as tactical HQs and must be prepared to assume static, sustained tasks or to surge for mobile combat operations. The asymmetric army will not move entire brigades through the readiness cycle at once, but will move each brigade group HQ through the cycle to ensure that, at any time, one of them is always prepared to deploy. Validation can be done by means of one or a series of command-post or computer-assisted exercises, either within Canada or while working with allies.²⁹ Should the need arise to surge and deploy the better part of a specific brigade for combat operations in major contingency, other concurrency requirements may be suspended and the MRP can be “paused” while all units are quickly brought up to the level required to deploy for such a contingency.

The other elements of each brigade, namely its armoured cavalry, engineer, artillery and combat service support units, will also move their HQs and sub-units through the MRP, and the HQs can add depth to the MRP by providing

HQs and force elements for certain sustained presence operations. They must also be prepared to attach sub-units to manoeuvre forces in different phases of the MRP to form bn gps or BGs if required.³⁰ The engineer support, air defence, electronic warfare, military intelligence and influence activities units of the combat support brigade will generate unique force elements in conjunction with an affiliated brigade group HQ, ensuring that these HQs have higher-level enablers prepared to deploy with them. Lastly, the SFCB battalion will consistently force generate an SFCB company, ensuring that the asymmetric army has, at all times, an organization prepared to take the lead in deploying to build partner capacity.

As a whole, the asymmetric army and its revised MRP will assure the joint force of a wide array of forces for operations. These can be broken down into six lines of effort (LOE) which, at all times, provide for the following:

LOE 1 – Domestic IRU: At a minimum, one domestic response unit in each divisional area ready to meet Domestic Response tasks.

LOE 2 – Light Force: Provided by a CLBG, one light-force bn gp at high readiness (seven days’ notice to move), with a rotating vanguard company at 72 hours’ notice to move. This light force can meet the rapid response tasks, can provide the vanguard for sustained/surge tasks or, due to mission requirements, may be required to fulfill sustain presence or sustained/surge combat operations.³¹

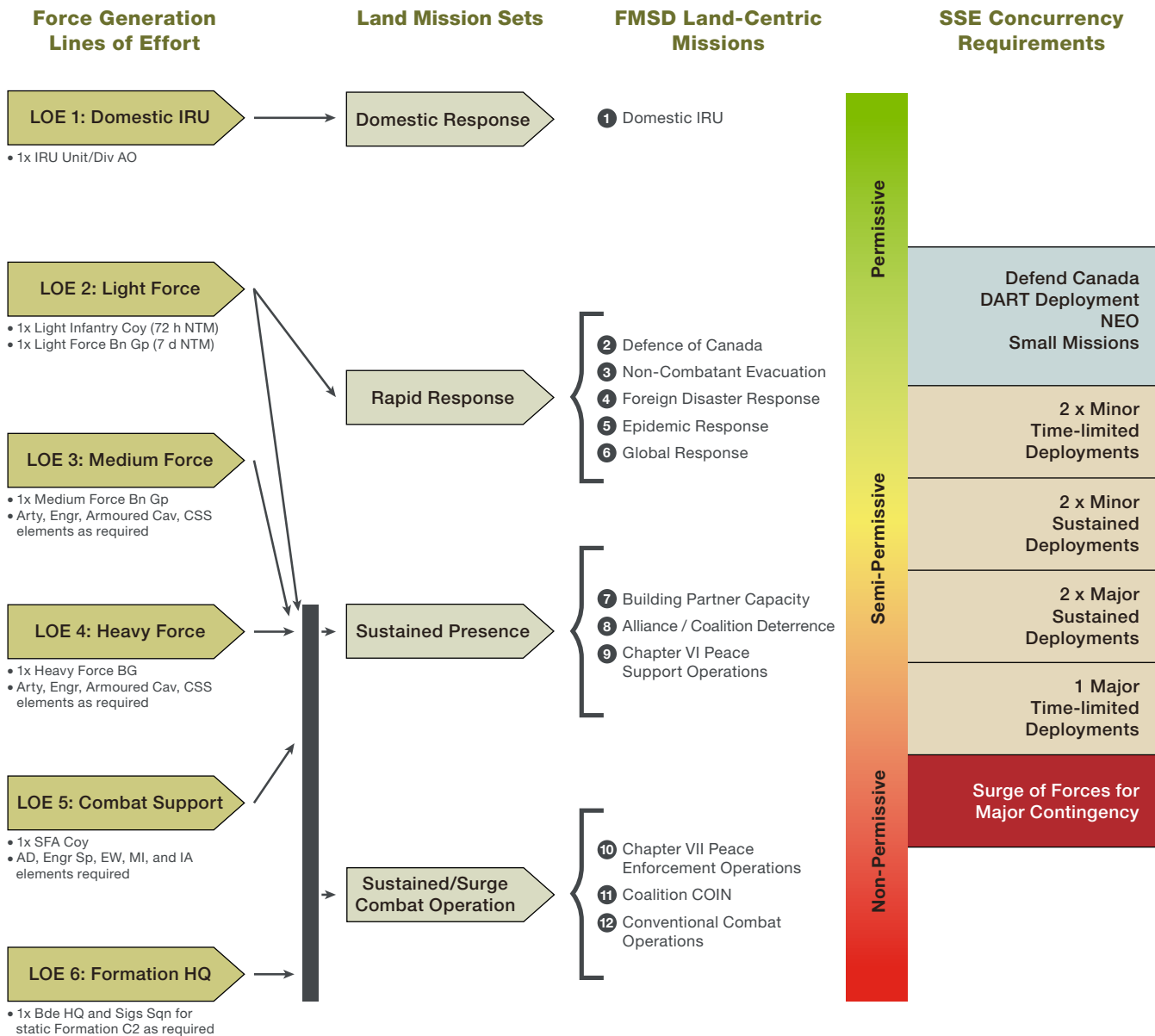


Figure 5: Force Generation Lines of Effort of the Asymmetric Army

LOE 3 – Medium Force: Provided by a CMBG, one LAV 6–based medium-force bn gp/BG and combat support elements, to fulfill sustained presence or sustained/surge combat operations.

LOE 4 – Heavy Force: Provided by a CABG, one tank/infantry heavy-force BG and combat support elements, to fulfill sustained presence or sustained/surge combat operations.

LOE 5 – Combat Support: Managed by the Combat Support Brigade, with an SFCB company prepared to act as the lead for building partner capacity missions, together with specialized sub-units from the remainder of the brigade’s units.

LOE 6 – Formation HQ: A rotation of each brigade group HQ to provide formation command and control to alliance/coalition efforts for most missions.

As seen in Figure 5, the asymmetric army and its revised MRP provide a force that optimizes, in terms of efficiency and proficiency, the production of light, medium and heavy forces ready to operate against the widest array of adversaries in any type of theatre. It synchronizes Army force-generation activities to provide the optimal environment for building cohesive teams. Lastly, the LOEs enable the Army to meet the demands of concurrency, sustain varied forces abroad and surge SSE for any major contingency abroad.

HOW THE ASYMMETRIC ARMY WILL LIVE: FORCE LAYDOWN IN CANADA

Following on from the above description of how the asymmetric army fights and generates combat power, the structure of the force can now be explained: form follows function. The proposed asymmetric army, based upon the relevant limitations, assumptions and operational requirements, is diagrammed at Figure 6. It is organized with four brigades. In the West, 1 CMBG is assigned all of the Army's heavy resources and becomes 1 CABG, built around two mechanized infantry battalions, a tank regiment, an armoured cavalry regiment, and artillery, engineer and service support units tailored to support the heavy force. Conversely, 2 CMBG transforms into 2 CLBG, built around three light infantry battalions, a light engineering regiment, an artillery regiment and a service battalion. 5 CMBG remains a medium-force brigade, but with three LAV 6-equipped mechanized infantry battalions rather than two. Lastly, the Combat Support Brigade generates forces for specialist artillery, engineer, electronic warfare and influence activities, as well as intelligence force elements. It also includes a security force capacity building (SFCB) battalion formed from the Atlantic Canada-based mechanized infantry battalion.

To transform our current symmetric force into the asymmetric force proposed in this article, some changes to the Army must occur. First, some existing units would have to be converted. The Royal Canadian Armoured Corps would need to reallocate all tanks to the tank regiment in Edmonton and restructure its other two regiments into armoured cavalry regiments capable of fighting the sense/strike battle. The combat engineer regiment and service battalion in Edmonton would similarly see concentration of armoured support vehicles as 1 CMBG transforms into 1 CABG.

Similarly, 2 CMBG would transform into 2 CLBG, and CFB Petawawa would become the home for the army's light forces. The engineer, artillery and combat service support units in Petawawa would undergo an internal transition to light structures to support the light infantry battalions within the brigade. Lastly, the mechanized infantry battalion at CFB Gagetown would undergo a significant transformation into an SFCB under the command of the combat support brigade.

There would also be a requirement to relocate units, which could mean physically moving units and their personnel, re-designating units in specific locations, or a combination of both. The 5 CMBG would see some conversion as it exchanges a light infantry battalion for a mechanized infantry battalion to become a fully mechanized formation. Table 3 shows unit movement and re-rolling requirements for the proposed army structure.

Although this unit movement and re-rolling would undoubtedly create some turbulence in the Army over the years required to conduct the unit moves and transformations, it is not an insurmountable task: Canada's closest allies and partners, including the US, the UK and Australia, have all gone through significant force structure reforms in the last decade to adapt their armies to meet new challenges.³⁴

Two issues with the proposal must be considered. The first is the regimental equities of the Infantry and Armoured Corps. Although "cap badge politics" must not trump operational concerns, cultural and institutional factors tied to the regimental system cannot be ignored, lest unforeseen friction affect any proposal for change. The solution for cap badge distribution is beyond the scope of this article but, needless to say, multiple options exist, including mixed-badge regiments and the rebadging of existing units to other regimental affiliations. The options could be investigated as part of a deeper study on implementing the asymmetric army.³⁵

The second issue is linguistic equity: the Army must ensure equal opportunity to serve in both of Canada's official languages. The asymmetric army would maintain the French-language formation, 5 CMBG, and there are a variety of options, some of which have been employed in the past, to give Francophones the opportunity to serve in light- or heavy-force units. Implementing the asymmetric army would require each corps and branch to examine the linguistic aspects and challenges of an asymmetric force structure and make recommendations to ensure equitable service opportunities for English- and French-speaking soldiers.

PART IV: ANALYZING THE ASYMMETRIC ARMY

Accepting transition to an asymmetric army requires understanding the advantages and disadvantages of changing the Army's force structure, which is more than 25 years old. It is also evident that adopting the asymmetric army could have a significant effect on the Army Reserve and the institutional support elements of the Army, as their form would also likely need to follow the Army's operational function.

As stated above, one of the limitations of this proposal is the lack of a detailed analysis of the structure of the Army Reserve. If the proposal is adopted, a follow-up estimate of the Army Reserve within the asymmetric army must be conducted. The estimate would need to consider numerous issues related to reserve formation structure, reserve force element allocation and corps/branch distribution across Canada, as well as how the Army would integrate the Army Reserve into the MRP. This would be a significant endeavour that could offer an important opportunity to amend a Reserve structure that is perhaps just as outdated as the symmetric Army Regular Force structure which this article proposes should be replaced.

LOCATION	GAIN (ARRIVING/RE-ROLED UNIT)	LOSS (DEPARTING/RE-ROLED UNIT)
CFB Edmonton	1× mechanized infantry battalion 1× tank regiment	1× light infantry battalion 1× armoured regiment
CFB Shilo	1× armoured cavalry regiment ³²	1× mechanized infantry battalion
CFB Petawawa	2× light infantry battalion	1× mechanized infantry battalion 1× armoured regiment
CFB Kingston		1× combat support brigade HQ ³³
CFB Valcartier	1× mechanized infantry battalion 1× armoured cavalry regiment	1× light infantry battalion 1× armoured regiment
CFB Gagetown	1× SFCB battalion 1× combat support brigade HQ	1× mechanized infantry battalion

Table 3: Asymmetric Army Unit Relocation Requirements

The role of the Army Reserve is one of the many considerations that arises in any analysis of the asymmetric army proposal. To identify the advantages and disadvantages of potentially adopting such a proposal, the SWOT methodology of strengths, weaknesses, opportunities and threats was used to analyze what makes the asymmetric army a better model than the current symmetric force.³⁶

In terms of strengths, the asymmetric army provides increased operational efficiency and proficiency through the centralization of light-, medium- and heavy-force capability into unique brigade groups, creating centres of excellence for manoeuvre, combat support and combat service support. It also provides optimized and flexible operational outputs to meet a wide array of adversaries and to operate within any theatre or environment with minimal adaptation. There is a “kitchen cupboard” approach that the symmetric army’s medium-force focus is not organized to provide.

An additional strength of the asymmetric army is that combat service support is optimized through functional concentration of resources and personnel within each brigade, with each service battalion focused on light-, medium- or heavy-force sustainment. This advantage also benefits the enablers of the Combat Support Brigade, which can be postured to support specific manoeuvre forces. Lastly, the asymmetric army’s force laydown makes the most of Canada’s geographic realities, with the heavy force located close to the wide-open manoeuvre areas of CFB Wainwright and CFB Suffield and the light forces co-located with high-readiness special operations forces units (where potential high-readiness synergies exist) and close to the strategic airhead of CFB Trenton.

In terms of weaknesses, the asymmetric army would require a readjustment to a new MRP with 8-month rotations. This is not difficult, and it has been done before, but the potential for friction exists, especially when combined with the requirement to move units and personnel as well. Additionally, if the asymmetric army must generate specific force types such as light or heavy forces for an extended period of time, it could require re-rolling of units to avoid overtaking any specific brigade. This re-rolling, although not insurmountable, could lead to increased time and costs for high-readiness training.

Another weakness is that the asymmetric army does not address the present issue of formation-level combat support sub-unit/unit dislocation from the manoeuvre brigades, making training and integration costly and challenging, especially for the Western Canadian brigade. Lastly, the asymmetric army could create a decreased breadth of experience, along with new career management challenges, as brigades and the soldiers within them become narrowly focused on specific light/medium/heavy force postures.

This survey of strengths and weaknesses reveals many opportunities in the proposal. First, the ability to reshape the MRP, focusing on genuine unit cohesion and key leadership and staff appointments, could tremendously improve the army’s force-generation process and prevent the turbulence the APS imposes on our current system. As well, the revised MRP’s LOEs orient specific units to specific tasks, creating the opportunity for more focused preparation and predictability in task requirements for units in high readiness.

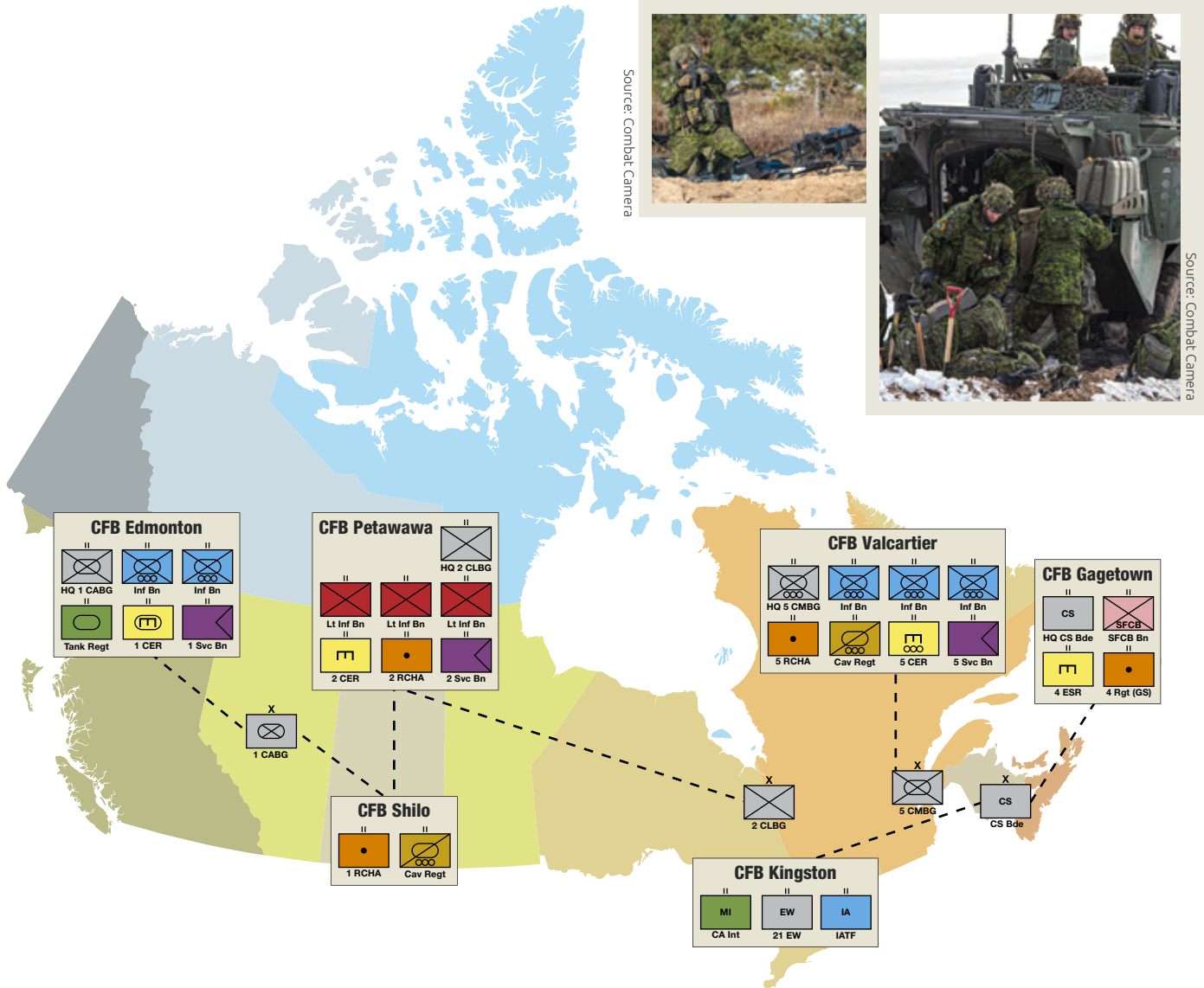


Figure 6: The Asymmetric Army

Opportunity could also be found by reviewing the Army’s regimental affiliation for infantry and armoured units and giving consideration to mixing affiliation within brigades. This would create more cross-pollination within the Army by mixing regimental representation in each brigade, as was done prior to 1993. Another opportunity would be to extend the changes to the field force to rebalance the institutional sustenance of the Army. Concentrating resources to support light, medium or heavy forces could be beneficial to the Canadian Division Supply Groups (CDSG) and the supply system. A final opportunity would be to use the impetus of changing to an asymmetric army to make meaningful improvements to the Army Reserve, which could include a refinement of mission tasks, to better enable augmentation and integration of Primary Reserve members into the MRP.

Adjusting the Army Reserve mission tasks is, conversely, one of the threats that could undermine the asymmetric army, as the Strengthening the Army Reserve (StAR) initiative has assigned mission tasks, and changing them after so short a time could cause friction and waste newly acquired training and skills. Other possible threats to the asymmetric army are the significant costs associated with re-scoping infrastructure to support light and heavy brigades and with moving units and personnel around Canada. Other potential threats arise from the need to address regimental equities, which was discussed earlier, and to address the linguistic demands on the Army.

This SWOT analysis indicates that, despite the weaknesses and threats, there are significant advantages to the Army’s operational output that strengthen its value to the joint



Source: Combat Camera

force that was proposed earlier: the provision of scalable land power to deter and, if required, defeat adversary actions. By focusing on function and letting form follow, the asymmetric army can have real potential to improve Army force-generation efforts.

PART V: CONCLUSION

If adopted, the asymmetric army proposed in this article would require a three- to five-year phased implementation plan. Thus, it fits into the *Force 2025* envelope. The first year or two would require unit organizations to be refined, tested and validated, with necessary person-year reallocations and doctrine updates being implemented. During this time, review of regimental affiliations and the Army Reserve estimate for its structure could be conducted. By Year 3, unit movement would begin and unit re-designation and reassignment would occur, so that by APS of Year 5 the asymmetric army would be established and operating under the revised MRP.

Why would the Army undertake such reform and risk the friction of reorganization while in the midst of sustaining numerous operations abroad? Hard choices must be made, due to the three operational imperatives described at the beginning of this article. *Force 2025* envisions an army structured to sustainably generate sufficient, scalable and ready forces for dispersed and concurrent missions. The operational demand of both *SSE* and the current strategic environment characterized by peer-state competition and irregular adversaries requires the army to maximize proficiency for all anticipated mission sets. The creation of brigade-focused centres of excellence for heavy, medium and light forces will give the Army a more diverse, proficient and sustainable force-generation base to meet these challenges.

The full implementation of light forces will give the asymmetric army a true increase in strategic and operational responsiveness on the part of forces optimized to move via any means and to operate in mobility-restricted environments. Once the Army's has concentrated its light forces and provided them with appropriate tasks and resources, it will finally, after decades, see the full development of "purpose-built, scalable and agile light forces."

Concentrating the Army into brigade-focused light, medium and heavy forces will also maximize the efficiency of the Army's modest resource base. Vehicles and equipment are concentrated in a logical fashion, and the sustainment capability to maintain it all is rationalized to ensure optimal levels of support. The army's combat support brigade is able to better specialize its sub-units to support specific light/medium/heavy force units. By avoiding penny-packeting of "low-density, high-demand" resources, the asymmetric army better makes use of what it has in terms of people, equipment and resources.

Lastly, the asymmetric army enables a superior MRP, focused on producing and managing cohesive force elements. When units are able to focus on specific mission sets and key leadership and staff can remain in place throughout an entire readiness cycle, valuable collective training during the road to high readiness is not wasted by misalignment with institutional realities such as APS. The asymmetric army will simply produce better teams for the Ready Phase of the new MRP.

The asymmetric army will change how the army lives, trains and fights. Adopting such a proposal will demand a commitment of resources and effort by the entire Army. In the past decade, our principal allies and partners have all made similar decisions to update their force structures,

and the Canadian Army should not shy away from making the hard choices to improve its operational output by adjusting its base. The current symmetrical force structure is not fit for purpose, and change is required for the Army to best provide scalable land power to the joint force to deter, contest, confront and, if required, defeat adversary actions, thereby improving the CAF's ability to conduct its core tasks in the defence of Canada. 🍁

ABOUT THE AUTHOR

Lieutenant-Colonel Cole F. Petersen is an infantry officer with Princess Patricia's Canadian Light Infantry (PPCLI). He has served in 1 PPCLI, 3 PPCLI, HQ 1 CMBG and CANSOFCOM HQ and is currently posted to the Army Staff. He is a graduate of the United States Marine Corps Command and Staff College and the United States Marine Corps School of Advanced Warfighting.

ENDNOTES

1. See National Defence, *Strong, Secure, Engaged: Canada's Defence Policy* (Ottawa: Government of Canada, 2017), 18 (hereinafter, *SSE*). The eight missions are to (1) Detect, deter and defend against threats to or attacks on Canada; (2) Detect, deter and defend against threats to or attacks on North America in partnership with the United States, including through NORAD; (3) Lead and/or contribute forces to NATO and coalition efforts to deter and defeat adversaries, including terrorists, to support global stability; (4) Lead and/or contribute to international peace operations and stabilization missions with the United Nations, NATO and other multilateral partners; (5) Engage in capacity building to support the security of other nations and their ability to contribute to security abroad; (6) Provide assistance to civil authorities and law enforcement, including counter-terrorism, in support of national security and the security of Canadians abroad; (7) Provide assistance to civil authorities and nongovernmental partners in responding to international and domestic disasters or major emergencies; and (8) Conduct search and rescue operations. In some of these missions, the Army will provide the preponderance of force elements, while in others the Army could have a minimal, supporting role.
2. Commander Canadian Army, *Advancing with Purpose: The Army Strategy*, 3rd edition (Ottawa: Government of Canada, 2014). Designed to meet the Government's *Canada First Defence Strategy* of 2008 (which was superseded by *SSE*), *Advancing with Purpose*, 3rd edition, was intended to provide an output of four lines of operation based on specific missions, while *SSE* could potentially demand much more, with concurrency in the core tasks and the seven expeditionary missions tasked to the CAF.
3. 1901-1 (DLFD SI-2) *Force 2025 – Commander's Planning Guidance* (10 September 2020).
4. Light, medium and heavy manoeuvre forces are defined in Canada's capstone doctrine, B-GL-301-001/FP-001, *Land Operations*, 1-5. Heavy forces are those that deploy with armoured fighting vehicles and fight either from their vehicles or with their vehicles in direct, intimate support. Medium forces are strategically and operationally more deployable than heavy forces and have less firepower and protection than heavy forces. Light forces are defined as military forces rapidly deployable at all levels of command and optimized for terrain and conditions not suited to mechanized forces. They have significant strategic mobility, as they can be transported to any theatre by aircraft. However, their firepower is limited compared to heavy or medium forces, and they are vulnerable without the protection of dispersion, concealment or fortification.
5. Government of Canada, *SSE*, 49.
6. "Grey zone conflict" is a term describing inter-group competition that falls below a defined threshold of armed conflict. Although he never termed it "grey zone," the concept is commonly attributed to Russian Army Commander Valery Gerasimov, who defined it as "a tendency toward blurring the lines between the states of war and peace. Wars are no longer declared and, having begun, proceed according to an unfamiliar template." See Valery Gerasimov, "The Value of Science is in the Foresight: New Challenges Demand Rethinking the Forms and Methods of Carrying out Combat Operations" (Tr. Robert Coalson) in *Military Review*, Vol. 96, No. 1 (Jan–Feb 2016), 23–29. This was originally published in Russia in 2013, and



Source: Combat Camera

- argues that the United States frequently employs such approaches to prevail in conflict. In light of recent actions by Russia and China, the idea has emerged that they are now the leading employers of grey zone conflict and that the West must pace itself to stay competitive. This idea makes its way into *SSE*. For a good summary of grey zone conflict, including its theoretical weaknesses, see Frank G. Hoffman, "Examining Complex Forms of Conflict: Gray Zone and Hybrid Challenges" in *Prism*, Vol. 7, No. 4 (2018), 31–47.
7. Government of Canada, *SSE*, 49
 8. Government of Canada, *SSE*, 36.
 9. Canadian Army Land Warfare Centre (2019), *Close Engagement: Land Power in an Age of Uncertainty – Evolving Adaptive Dispersed Operations* (Kingston, ON: Army Publishing Office, 2019), 12–13.
 10. Commander Canadian Army, *Advancing with Purpose*, 3rd edition, 12.
 11. Author's observations at a DLFDF Force 2021 working group meeting held in November 2018.
 12. The modern Canadian Army came about in the early 1950s as a response to Canada's involvement in Korea and the Cold War. When Cold War expansion settled, the army consisted of three infantry brigade groups in Canada and one infantry brigade (which would be mechanized in the early 1960s) in Germany as part of Canada's commitment to NATO. Although nomenclature changed, with the renaming of the brigades to "Combat Groups" (except for 4 CMBG in Germany) in 1966, and "Canadian Brigade Groups" in 1976, the structure remained fairly similar throughout the Cold War. The 1976 changes also saw 2 Combat Group transformed into the Special Service Force (SSF). In 1993–1995, the Canadian Airborne Regiment was disbanded, the SSF was restructured into 2 CMBG, and 4 CMBG was removed from the order of battle, creating the symmetric army of three CMBGs. For histories of Canada's brigades, see W. A. West, *Army of the West* (Calgary: 1 CBG HQ, 1989), 135; and Sean M. Maloney, *War Without Battles: Canada's NATO Brigade in Germany, 1951–1993* (Toronto: McGraw-Hill Ryerson, 1997), 20–23, 73–74, 239, 484–486.
 13. 1901-1 (DLFD SI-5), *Master Implementation Directive – Light Forces* (26 September 2017), 5.
 14. Derived from an FMSD Joint Scenario Package briefing deck, dated 14 May 2019, which was designed to support force structure readiness assessment modelling.
 15. This is generally one IRU per Army Division, but 3rd Canadian Division will at times stand up a West and an East IRU to cover its geographically large AO.
 16. See *Master Implementation Directive – Light Forces*, 2.
 17. For the definition of a battalion group (bn gp) see B-GL-321-005/FP-001, *Battle Group in Operations*, 2–3: a bn gp is described as "an ad hoc and temporarily combined arms grouping based on a unit HQ; it is task-tailored for specific tasks/activities within the FSO. They typically include CS and CSS elements."
 18. This was certainly the allied experience in Afghanistan, where British and American formation HQs deployed to manage counterinsurgency operations which were drawn from a mix of light, medium or heavy brigades. The UK's 16 Air Assault Brigade was replaced first by the Royal Marine 3 Commando Brigade and subsequently by 12th Mechanized Brigade. See Anthony King, "Understanding the Helmand Campaign: British Military Operations in Afghanistan" in *International Affairs*, Vol. 86, No. 2 (2010), 317–318.
 19. See the U.S. Army's 2015 version of *FM 3-96 Brigade Combat Team*, 1-1 for a description of an IBCT.
 20. 1901-1 (DLFD SI-5) *Master Implementation Directive – Light Forces* (26 September 2017), 2.
 21. The parachute capability, and specifically the mass insertion of conventional soldiers, can be both emotive and debatable. On the one hand, the French success in employing parachute insertion in Mali for Op SERVAL is an indication of continuing utility; see Michael Shurkin, *France's War in Mali: Lessons for an Expeditionary Army* (Santa Monica, CA: RAND Corporation, 2014). For a more critical look at the parachute capability, see the analysis by Marc R. Devore, *When Failure Thrives: Institutions and the Evolution of Postwar Airborne Forces* (Fort Leavenworth, KS: The Army Press, 2015). These examples indicate that a full estimate would be useful: if maintaining the capability is found to be useful due to operational requirements, then it should be properly resourced.
 22. See the U.S. Army's 2015 version of *FM 3-96 Brigade Combat Team*, 1–6, for a description of an SBCT. A good review of the UK Strike Brigade can be found at Jack Watling and Justin Bronk, *Strike: From Concept to Force* (London: Royal United Services Institute, 2019).
 23. The role and structure of the Royal Canadian Armoured Corps (RCAC) has long been debated within the Canadian Army, and the issue is largely one of fighting vehicles available to the RCAC and the degree to which platforms drive doctrine and structure and vice versa. Some recent examples of this discussion can be found at Philip J. Halton, "The Re-Transformation of the Armoured Corps" in *The Canadian Army Journal*, Vol. 17, No. 3 (2017), 64–81, and Mathew McInnes, "First Principles and the Generation of Armoured Fighting Power" in *The Canadian Army Journal*, Vol. 17, No. 3 (2017), 92–113.

24. The armoured regiments today largely produce armoured reconnaissance squadrons. Aside from the questionable requirement for six to seven of these squadrons for the Army, they are limited to reconnaissance and screen tasks. The armoured cavalry organization proposed in this paper, provided with a mix of reconnaissance, guided missile and (possibly armed) UAVs, would be capable of fighting a sense/strike battle independently or in front or to the flank of a brigade. It could also conduct the full range of security tasks—screen, guard, and cover—listed at B-GL-301-001/FP-001, *Land Operations*, 7–110. One similar concept for the U.S. Army that has been discussed over the years is Col (Ret'd) Douglas MacGregor's Reconnaissance Strike Group; see <http://douglasmacgregor.com/rsggeneralpublic.pdf>.
25. The Canadian Army's doctrine has long prescribed large squadrons of 4 troops and 19 tanks. There are certainly advantages to this organization, but other structures exist and have been proven in combat. It might be advantageous to go with four smaller squadrons (perhaps with three troops, or with a three-tank troop) in the tank regiment to enable the generation of more manoeuvre sub-units for the brigade.
26. The Army's last significant reorientation (as there was no real reorganization) came following the end of the combat mission in Afghanistan. See 3000-1 (Army G35) *Army Reorientation Plan* (23 February 2011). This document instituted the four Lines of Operation described in *Advancing with Purpose*, 3rd edition, and detailed a 24-month MRP at Annex B, Appendix 5, but the Army implemented 18-month and later 36-month cycles, with each brigade spending 6, and later 12, months in each phase of high-readiness preparation, high readiness/deployment, and re-constitution.
27. The 2018/2019 Army Operating Plan allocated a total of \$20.1 million dollars for Exercise MAPLE RESOLVE, with \$12.7 million of it being spent on movement of vehicles, equipment and personnel from the Primary Training Audience at 2 Canadian Division in Quebec. To put those costs in perspective, a yearly annual CMBG operating budget is typically \$10 million to \$13 million.
28. According to the Canadian Forces Task Plans and Operations (CFTPO), the 2019 serial of Exercise MAPLE RESOLVE had a task requirement for 4,693 personnel. Of this, 3,042 tasks were for the Primary Training Audience, while the other 1,651 tasks were in support. This should be measured against the output. The question should be asked: Can the army achieve equal or superior results through other ways of conducting readiness validation exercises?
29. These are the Warfighter serials conducted with the U.S. Army and the Large-Scale Exercise (LSE) iterations with the U.S. Marine Corps.
30. The combat support units of a brigade—the Combat Engineer and Artillery regiments—were for a time primarily viewed as force generators for sub-units to attach to a manoeuvre BG, and the previous Army strategy and MRP based force generation on that type of all-arms BG. This should not be assumed as the norm, as it is equally necessary to consider force generation for complete Combat Engineer and/or Artillery regiments, either for employment within a formation or to deploy as an HQ for a specific task such as BPC or peace support operations.
31. May require alteration of medium- or heavy-force battalions if demand for light forces is high.
32. The movement of an armoured cavalry unit into Shilo and a mechanized infantry battalion out appears to be an extra move. This is proposed deliberately, as the co-location of 1 CABG's armoured cavalry regiment and artillery regiment will foster close training between the two units most heavily involved in the brigade's sense/strike battle.
33. Moving the Combat Support Brigade from Kingston to Gagetown puts a brigade HQ in Atlantic Canada and co-locates this brigade with the majority of its units, easing command and control issues.
34. The U.S. Army possessed a mix of light and heavy forces throughout the Cold War, but they were focused at the division level. The Transformation initiative of 2006 has since refocused on the brigade level and created a mix of light, medium and heavy brigades. The British Army's 2020 initiative, started in 2012, dramatically reshaped the British Army into a light and heavy reaction force and a medium adaptive force. Refinements since inception have added the strike brigade and the specialized infantry group for BPC tasks. In the opposite vein, the Australian Army's Plan Beersheba, announced in 2011, moved that force from three asymmetric brigades to three multi-role combat brigades, which are essentially mixed forces similar to our CMBGs. What is important is that none of the three major Five Eyes partners have shied away from making significant changes to force structure.
35. Adding regiments to the Regular Force order of battle by rebadging and/or amalgamating existing units is not uncommon, and both the British and the Australians have done so recently with their regimental systems. In the case of the asymmetric army, the infantry could reorganize into four Regular Force regiments (two English, one French, and one bilingual) of two battalions each, along with a new, unique identifier for the SFCB battalion. The options are out there, and regimental form must adapt to operational function.
36. This SWOT analysis was conducted at a November 2018 Army working group that looked at options for Force 2021. Thus, the analysis is not solely attributable to the author.